COMPOST Magazine

★ For the Farmer, Gardener, Horticulturist, Nurseryman, Commercial Grower and all who till the soil.

IN THIS ISSUE

Nutrition and Health 5
The Balanced Compost Heap 9
Are Insecticides Answer to Grass Grub 10
Sound Fluoridation Policy 12
Influence of Soils on Dental Decay 13
Do You Know, Do You Care What You Are Eating ? 16
Gardening in Sand 19

DECEMBER, 1959

(Registered Bi-monthly Magazine)

it's SPRING all the year round -

under a CHASE Cloche!

Be Early!
BE Late!
— Under a
Chase Cloche

Continuous Chase cloche gardening is the simple, intelligent way to make full use of your garden plot—be it big or small. Chase cloches hold warmth in the ground . . . they enable you to extend the season by cropping early and cropping late. Chase cloches are easy and convenient to use and shift . . . the perfect miniature, portable glass house for the amateur and the professional gardener. The season for most plants can be greatly extended. With Chase cloches you get more crops . . . greater production . . . bigger profits.

Enquire at your nearest Seedsman

Or write to:—

THE N.Z. FRUITGROWERS FEDERATION LTD.

Head Office: Box 882, Wellington.

And at Auckland, Hastings, Nelson, Motueka, Blenheim, Christchurch,
Roxburgh, Alexandra.

COMPOST MAGAZINE

The Official Organ of the New Zealand Organic Compost Society (Incorporated) is published six times yearly and is issued free to members.

OFFICERS :

Patron:
His Excellency The Governor-General, Viscount Cobham.

Vice-Patrons:
Lady Louise Howard (Great Britain), Lady Eve Balfour (Great Britain), Sir C. Stanton Hicks (Australia), D. D. Gill, D. M. Robinson, F.N.Z.I.M., Dr. Guy Chapman (Founder), T. D. Lennie, M.B.E., A.H.R.I.H. (N.Z.), F. C. Cooper.

President:
R. L. Thornton, N.D.H. (N.Z.), F.R.I.H., Box 2260, Auckland.

Vice-Presidents: W. T. Wainman and Presidents of Branches.

Immediate Past President: F. C. Cooper (Dunedin).

Auditor: L. F. Shalders, A.P.A.N.Z.

Proof Reader: H. F. Sewell. *Translator*: Mrs A. K. Bristow.

National Secretary:
R. E. Betteridge, 27 Collins Street, Christchurch. Phone 88-400

Editor:
Jack D. Meechin, 875 Ferry Road, Ferrymeade, Christchurch.

BRANCH SECRETARIES :

Auckland: Mrs R. L. Thornton, P.O. Box 2260, Auckland, C.1.
Blenheim: Reg Watson, 49 Dillon Point Road, Blenheim.
Canterbury: L. F. Shalders, A.P.A.N.Z., Box 828, Christchurch.
Dannevirke: K. L. M. Cawsey, Box 4, Dannevirke.
Hamilton: A. W. Wheeler, 15 Piako Road, Claudelands, Hamilton.
Hastings: A. J. Butcher, Lyndhurst Road, Hastings.
Invercargill: G. Edmondston, 89 St. Andrew Street, Invercargill.
Levin: D. Hartstonge, 26 Dudley Street, Levin.
Napier: Mrs M. Allaway, 13 Main North Road, Westshore, Napier.
Nelson: Mrs J. S. Yellowlees, Theatre Bldgs, Wakefield, Nelson.
New Plymouth: Mrs G. Parkinson, 5 Massey Street, New Plymouth.
Oamaru: Mrs D. G. McDuff, "Leathad", 6D, R.D., Oamaru, 'phone 2429.
Otago: Mrs N. L. J. Nelson, 15 Laing Street, Port Chalmers.
South Canterbury: C. S. Gordon, 244a Otipua Road, Timaru.
Wanganui: K. L. Keir, Tayforth Road, Wanganui.
Wellington: Mrs A. J. Bristow, 58 Bassett Road, Johnsonville, Wellington.
Upper Hutt: W. T. May, 18 Ngata Grove, Trentham.

Full particulars and form of application for membership may be obtained from any of the above Branch Secretaries.

ANNUAL SUBSCRIPTION :

ENDOWMENT MEMBER £1, ORDINARY MEMBER 10/-.

Special Announcement

FARM and GARDEN, the new 100 page monthly magazine devoted entirely to the Organic cause, has pleasure in announcing that the Editor of "COMPOST" has been appointed an agent for receiving subscriptions.

FARM AND GARDEN

is a magazine for all who love the land. Its contributors represent the cream of the organic school and they bring to readers the latest developments from all over the world.

This mine of information and happy reading can be yours for 12 months if you send 22/9 to

THE EDITOR, "COMPOST",
875 Ferry Road, Christchurch.

NAME ....

STREET ....

SUBURB .... CITY ....

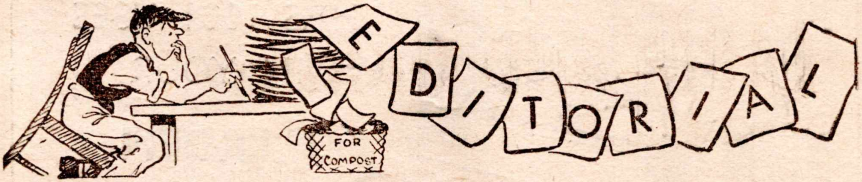
Please Print Clearly

For ease of mailing it is suggested that £1/2/9 can be split up—£1 note, and 2/9 stamps (registered mail).

COMPOST MAGAZINE

The New Zealand Organic Compost Society has as its aim the encouragement of the fertilisation of the soil with humic Compost made from animal and vegetable wastes, instead of with water-soluble chemical fertilisers. Our aim is to promote plant, animal and human health — healthy soil — healthy food — healthy people!

Vol. 18, No. 6 *Eighteenth Year of Publication* Dec. 1959



THE PEOPLE'S VERDICT

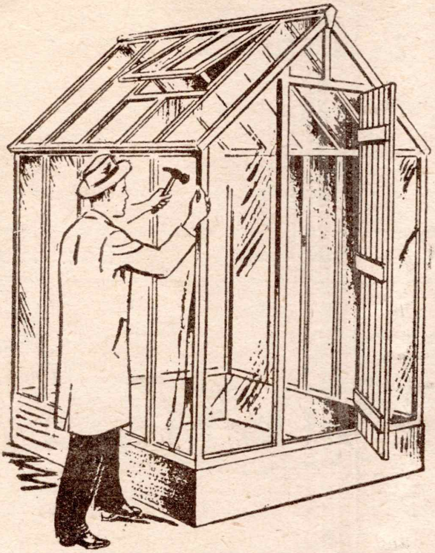
IT is most pleasing to see how decisively the people rejected fluoridation at the recent elections. Polls were held at seven centres and in each case those in favour of fluoridating the public water supplies were in the minority, in some cases overwhelmingly so.

The Compost Society has opposed fluoridation since the idea was first mooted here and it is encouraging to know that the people have made such a clear cut decision.

We have always been of the opinion that the answer to dental cares lies not in fluoridation but in food. A correct diet, rich in wholegrains, wholefood, fruit and vegetables, grown in a healthy soil, fed naturally, and a big decrease in the quantity of sweets and white sugar would materially decrease the incidence of dental caries. That the influence of soil types plays its part is becoming more understood and it is refreshing to know that some research along these lines has already been instituted in this country.

JACK D. MEECHIN,
Editor.

Articles dealing with these subjects appear on pages 12 and 13 of this issue.



VERSATILE

POLYTHENE

HAS 1001 USES
IN YOUR

GARDEN

Put Polythene to work in YOUR garden. Cheaper than glass, it is Shatterproof, Damp-proof, Dust-proof and Rot-proof. Transparent and odourless, it resists acids and admits ultra-violet and infra-red rays.

Polythene is easy to handle, cheap and long lasting. Its many uses include: Greenhouse construction, Plant protection, Seed frames, Cloches, Greenhouse insulation, etc.

BLACK POLYTHENE

Black Polythene laid out in strips and held down with soil encourages plant growth and saves weeding. Crops are planted through slits in Polythene. Growth is increased, moisture loss lessened and crusting and packing of soil reduced. Ideal for Strawberries, Vegetables, etc., keeps plants clean and healthy.

Available from:

R. & E. TINGEY & CO, LTD.

Wholesale and Retail Paint and Hardware Merchants

154 Tuam Street, Christchurch

Branches throughout New Zealand

Nutrition and Health

By "Practising Doctor"

The Haughley Experiment is unique in that it is one place in the world where practical farming tests are daily taking place to prove or disprove the claims made by both the organic school of thought and those who favour the use of chemical fertilisers. There is also a mixed section to test the claims of those who favour a combination of the two types of farming. A consulting biochemist, Dr. R. F. Milton, B.Sc., Ph.D., E.R.I.O., M.I.BIOL., is in charge of the analytical surveys.

The food value of crops grown under similar conditions but with different manurial programmes is most enlightening and in this article, our contributor "Practising Doctor" sets out in detail some of the important points noted.

To those people who are interested in the increasing amount of ill-health in plant, animal and man, the Haughley Experiment shows great promise in pointing the way to future research. It originated when two ladies who were neighbours in the County of Suffolk, England, began to devote their thoughts to why there was an increasing amount of ill-health in the community and what could be done to achieve a more positive approach to health. One of these ladies, Miss Debenham, was prevented from entering the practice of medicine by her own ill-health after some years' study. In 1938 she conveyed "Walnut Tree Manor" and land near Haughley, to a Trust formed to do some ecological research with a view to ascertaining facts which would lead to an improvement of positive health in the community, through a more wholesome food supply. Shortly after this Miss Debenham died. The other, Lady Eve Balfour, who is now a world authority on soil and nutrition and present field director of the Soil Association, leased her New Bells Farm to the Trust for the same purpose. The experiment was to be run by five managing trustees.

The combined holding was divided into two 75 acre sections and one 32 acre section. Thus there are three separate farms working side by side.

Stockless

The first is a 32 acre unit worked as a small stockless farm having no animals, and the growing of crops is aided by inorganic fertilisers and green manuring. It is worked on a five-year rotation—wheat, sugar beet, barley, barley, green crop — fallow. All cereal crops are undersown with trefoil for ploughing back, and all seed is produced on the unit with the exception of sugar beet and trefoil.

The 75 acre units follow eight-year rotations including four-year leys and the use of lucerne. There are a few acres of permanent pasture. Each produces its own seed and supports the same head of livestock from its own produce.

Organic

One 75 acre unit is worked as an "organic" farm. Deep rooting herbs are used in the composition of the leys, farmyard manure is composted and mineral licks for livestock given as dried seaweed. No fertilisers or compost-making materials are imported.

Mixed

The other unit (the mixed section) is similar to the organic except that orthodox ley mixtures are used; mineral supplements to livestock are given in the usual form of mineral licks; the farmyard manure is applied not composted and supplemented with the regular use of the usual range of inorganic fertilisers for the district.

A small quantity of fish meal has ben brought in for the poultry together with the seaweed and mineral licks already mentioned, but no other feeding stuff of any kind has been brought in to either unit. The two units share a bull and two horses and also run singly their cattle, hens and pigs.

> *The Haughley Experiment was designed to contrast different methods of farming over many years in order to ascertain any difference in quantity and in quality of produce, susceptibility to disease, etc. Many important agriculturists and doctors consider that health and resistance to disease varies with the diet, and that the quality of food is influenced by the quality of soil on which it is grown. Two of these gentlemen are the late Sir Albert Howard and Sir Robert McCarrison who devoted their lives to the study of nutrition and health.*

The experiment is to be conducted:

a. Over a period of many years, so that continuity is secured.
b. Over successive generations of plants and animals nurtured in the same way, so that cumulative effects may have full play.
c. On a regular rotational basis, so that all other conditions may be those of ordinary farming practice.
d. On areas of land as nearly as possible comparable as regards soil type, drainage and other basic factors.

Since 1952 Dr. R. F. Milton, B.Sc., Ph.D., F.R.I.C., M.I.BIOL., has been in charge of the soil testing and analytical work and during his first five years he made over 25,000 separate analyses of soil and produce. The analytical work has brought many interesting things to light.

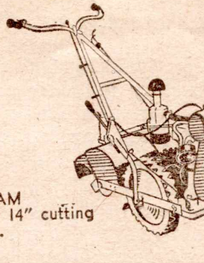
Some extracts taken from "Summary of the Analytical Work" carried out by Dr. R. F. Milton at Haughley during 1957. (Journal of the Soil Association, January, 1959):

The humus figure (based on a total organic carbon) is shown as representative of the differential between the sections. The general trend previously reported has been maintained. i.e. the soils on the Organic Section show a steady upgrading, whilst those on the Stockless Section with low humus content continue further to diminish. We continue to note that the fields with high humus content on the Organic Section show a good tilth, while the fields with low humus on the Stockless Section exhibit loss of soil structure and a tendency to pan. We have confirmed that high values in water holding capacity are given with soils high in humus. We have confirmed previous findings that the addition of nitrogenous fertilisers does not materially increase the level of nitrate nitrogen for more than a short period after placement. Total nitrogen levels are highest on the organic fields which have no fertiliser for many years. The lowest nitrogen content is found in Stockless fields, which have had heavy dressings of nitrogen in some form or other since 1948. The Mixed Section again yielded larger amounts of silage and hay as bulk, but the nitrogen (i.e. protein) of the material was higher from the Organic fields.

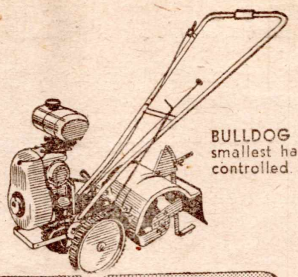
> *We have previously pointed out that the recovery of mineral in crops bears no relationship whatsoever to the amounts of fertiliser added in terms of N, P and K. The loss of applied fertiliser is of the order of 90% in the case of root crops, and is extremely high also with cereals.*

Randomised samples of cereals were taken for weighing 100 grain lots. We confirm our previous findings that cereals from Organic fields are generally larger and heavier than from the other two sections, and that

(Please turn to Page 24)



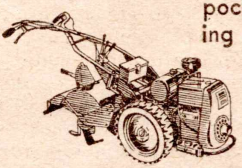
BANTAM
10″ or 14″ cutting
widths.



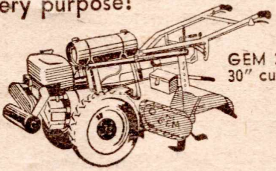
BULLDOG the
smallest hand-
controlled model.

ROTAVATOR

A model available for every pocket . . . every sized holding . . . every purpose!



YEOMAN 4.5 h.p.
15″ cutting width.



GEM 20″, 24″ and
30″ cutting widths.

For Demonstration Consult the Authorised Dealer . . .

A. R. MACKAY LIMITED

33-39 Lichfield Street, Christchurch, C.1.

Dealers for HUMBER, PLYMOUTH, SUNBEAM CARS
COMMER-KARRIER TRUCKS

CAMP IN COMFORT
at CAMPERS' PARK

307 PAGES ROAD, NEW BRIGHTON

All the enjoyment of Camping
plus the comforts of a home!
Motels, Cabins, Caravans. Pitch your tent or park your caravan. Swimming Pool, Picture Theatre, Bendix Washing Machine, Electric Cooker.

MAKE CAMPERS' PARK YOUR RENDEZVOUS
and HAVE A CARE-FREE HOLIDAY!

Phone 75-236,
Christchurch.

H. F. Sewell, Proprietor, extends a special welcome to all Composters.

CALLING ALL GARDENERS!

Did you know that there are approximately 5,000,000,000 living organisms per gramme in your soil which, when naturally fed with compost made from animal and vegetable wastes, produce the humus which is the basis of a fertile soil, thereby promoting HEALTH for plant, animal and man.

Artificial fertilisers are merely chemical substances which stimulate plants to unnatural activity. They are not foods for soils, plants or people and they kill precious millions of the unpaid workers of the soil. Plants then have to be nursed through an increasingly artifical existence by feeding, dusting and spraying with more and more chemicals, some of which are actively poisonous.

Have you wondered why your vegetables are lacking in flavour? A few years ago French farmers were officially advised to use artificials each alternate year, but after a short trial reverted to their old composting methods, as their foods and wines no longer tasted so good!

There is a growing consciousness that all is not well, and a stirring uneasiness because here in New Zealand one out of every three of the population is receiving some State Health Benefit.

The source of GOOD HEALTH is in the food we eat—the food comes from the soil. Start there — make a healthy living soil, and build a healthy, disease-resistant people. Healthy Soil—Healthy Foodstuffs—Healthy People!

LEARN HOW: By joining the COMPOST SOCIETY

Come to our Public Meetings — see elsewhere in this magazine.
Use our up-to-date Branch Libraries and receive our popular Magazine.

* * *

SUBSCRIPTION FORM

N.Z. Organic Compost Society (Inc.)

Enclosed herewith please find £1 (endowment) 10/- (ordinary) being

new member's subscription for year ending Dec. 31, 1960
renewal subscription for year ending Dec. 31, 1960
(Cross out whichever not applicable)

Name (Mr/Mrs/Miss) ....

Address ....

....

(BLOCK LETTERS please for names and addresses)

Please send amounts to your local branch secratary (see elswhere in the magazine) or, if in doubt, to the National Office, 27 Collins Street, Addington, Christchurch.

THE BALANCED COMPOST HEAP

Every Compost heap needs air, moisture and heat. Full success depends on the right balance of these factors, which can be controlled by the builder. I would divide the problem into two, writes Maye E. Bruce, in "Mother Earth".

1. Balance of texture, i.e. soft and fibrous.
2. Balance of consistency, i.e. moist and dry.

As these factors depend on natural and very variable circumstances, including the weather, it is impossible to lay down definite hard and fast rules, but the following hints and fundamental reasons may help to solve the problems.

1. *Balance of Texture*

Aim at a mixture of textures—fibrous stems break down slowly, they keep the mass open and aerated. Soft luscious green matter, such as lawn mowings, chickweed and lettuce break down quickly and generate much heat in the process; but under pressure they go to an airless mush which eventually turns into a mass of putrefaction. Balance these opposing conditions by combining them; mix the soft and the fibrous either by building them in alternate thin layers or, better still, by chopping the harder stems and mixing the day's take, hard and soft, all together on the ground; you will thus get a balance of aeration and potential heat. Incidentally it saves time, because you can fork the mixture on to the heap more quickly, and without anxiety about the thickness of the layers, which sometimes proves a pitfall.

2. *Balance of Consistency—Moist and Dry*

Some plants contain 90 per cent of water; all plants vary according to weather conditions. A dry hot summer results in desiccated plants in the autumn; such plants, having little moisture within themselves, would quickly dry out, create an air-pocket and reappear covered with a grey mould-like dust. Counteract this tendency, moisten dried out materials by watering them on the ground, not on the heap, then mix them as advised before. Dry hay, straw, bracken, autumn nettles and the forgotten withered pile of weeds will all benefit by this watering and the balance will be readjusted.

In the case of an all-soft heap with a preponderance of ripe farmyard manure, or lawn mowings, both heavy, close materials, to tread would be a mistake, as too close pressure leads to airless conditions and eventually putrefaction. With a well-mixed heap there is no danger of over compression because the fibrous stems will always maintain air-space. The soft green matter surrounding them shrinks quickly as the structural breakdown takes place, and in shrinking creates a vast network of small air spaces throughout the heap.

Other factors in this question of air, moisture and heat are:

Ventilation

Make vertical air-holes in large heaps (over 6ft. x 3ft.) and air apertures in the bins, either by leaving spaces between the boards or by drilling four or five holes in the sides.

Moisture

Ensure good drainage.

Heat

Retain the damp heat by keeping sacks over the topmost layer at all times.

General Balance

During the process of building, add the following contributions:

Soil

An occasional scatter, about one-eighth of an inch in depth—not more—till the final covering, which should be about two inches.

Lime

A dusting only; scatter it on three times during the building, or on the pile of green matter before you mix it on the ground.

Farmyard Manure

If you can get it, use it in thin layers throughout the heap. Manure is an asset, but it is not an essential. I have made many successful heaps without it.

ARE INSECTICIDES ANSWER TO GRASS GRUB, PORINA?

In an article published below, the well-known north Otago farmer, Mr J. W. Nicolls, takes issue with those who advocate the control of grass grub and porina by the use of insecticides.

In the Otago Daily Times of October 10, a North Otago contributor speaks of the damage done by grass-grub and porina this year, and refers to the prescience of those who applied D.D.T. early enough to save pastures.

I looked up the word prescience and the meaning is given as "foresight", so it seems a singularly inappropriate word to use in that context.

The use of D.D.T. is more of a desperate last resort to many farmers.

Surely, those of us who grow pastures which are not adversely affected by grubs and who are therefore not tempted to use insecticides have more claim to foresight?

There are two possibilities in connection with these pests which need to be studied, and it might be useful if all farmers watched for developments on the lines suggested.

First, there is the possibility of control by management in late summer or autumn.

Most farmers have seen the wheel marks of a heavy machine, perhaps a mill or big lorry, green across a pasture otherwise brown with grub-killed grass.

Most tracks which are regularly used are unaffected, but in the case of the passage of an implement only once giving complete immunity, is it a matter of consolidation or is there a particular time of year when the grub is vulnerable?

It seems to me that if enough cases of that sort of happening were reported, with details of dates, weights, speed, time of day or night, in fact, any details known for certain, there might appear a pattern which would indicate some action which could be taken such as rolling or tramping with stock at a certain time.

Effective Action

For years, I have sowed paddocks of lucerne with grasses in January. These often show patches of grub in March. The ewes are driven over those paddocks, mobbed up tightly so as to tramp evenly and graze as little as possible, preferably when the ground is damp.

This treatment always seems to work, though of course, there is no proof that if there had been no tramping, things would have been worse. Incidentally after this mixture is established the grub has sometimes a beneficial effect in renovating it.

The second possibility, on which notes should be compared, concerns the incidence of attacks after application of insecticide.

There have been cases overseas where the use of an insecticide has produced immune strains of the pest, which tend to flourish because the parasites which normally keep the pest in check have been almost wiped out, giving the pest a clear run. This could happen in the case of the porina. There is an insect which lays eggs in the porina grub, the eggs hatching and feeding on that grub. It seems more than likely that the grubs, weakened by the parasite, will be the first killed by the insecticide and with them die their parasites.

This may be happening now. If it is, the results will surely show up next year after this year's heavy attack.

One would expect the build up in perhaps two or three years after the application of the insecticide.

This is theoretical but there are some indications that there is such a build up.

Early this year, there was a species of official blitz aimed at promoting the use of insecticides against grass-grub and porina.

The Department of Agriculture ran a story about un-noticed damage, and someone, I forget who, took a wild swipe at a figure to represent the annual damage by grubs—£32 million no less. This must be rated highly as a thoroughly unscientific piece of guesswork.

We all know that there is a great deal of damage, but to attempt a balance sheet with only a debit side is unlikely to be very convincing.

Rejuvenating Pasture

There have been many cases where old pasture has been re-juvenated by an attack of grub.

In a dry district like North Otago, the grubs often do jobs it is too dry for the worms to do, such as aerating the soil and apparently breaking down dead roots.

As for the unseen damage by a low grub population, it may be unseen benefit. There are always grubs in the grass by the roadside where results might be worth watching.

The fact is that damage by grubs cannot be estimated, but compared to the damage done by insecticides the figure for grubs might appear almost precise.

With insecticides, there is a continually growing danger to humans and livestock. There is a grave danger to our produce market through build-up in carcass and in butter fat.

There is a completely unknown danger in the disturbance of all the life of the soil, on the healthy functioning of which plants depend for their food. Animals and humans depend upon the plants.

This last is probably much the most serious danger. Even if it were desirable to wipe out both grub species (even that is not certain), it would be quite impossible as they are present in the rough country as well as in grass paddocks.

They are natives of New Zealand. So the problem we have to solve for ourselves is: "How to live with grass-grub and porina."

Probably anyone can step out from under this worry by using pastures which the grubs do not harm and no insecticides.

In the meantime, why not try rolling, tramping, grazing, management, and using our heads, or we shall flounder deeper?

—Otago Daily Times.
(Sent by Mrs E.C., Oamaru.)

SUBSCRIPTIONS TO THE SOIL ASSOCIATION

We are pleased to announce that any member who wishes to join the Soil Association of Great Britain or who wishes to renew his or her subscription can now do so without experiencing difficulties due to the finance regulations of this country.

The procedure is to contact the Wellington Branch of the A.N.Z. Bank who will make the necessary transactions.

With the increased demands on foodstuffs there is every indication that production must be stepped up considerably in the future in order to retain the present balance. *(Mr C. A. Murray, Director of Conservation in Southern Rhodesia).*

"COMFREY"

The Wonder Plant

Well Grown Plants now available—

6 plants 5/6; 1 doz. 10/6; 25 for 17/6; 50 for 30/-; 100 for £2/17/6 Post Free.

LITERATURE ON HEALTH RECIPES CULTURAL DIRECTIONS—Free with Orders—1/- each to others.

Henry Doubleday Research Assn. Booklet "Compost Comfrey And Green Manure", by Laurence D. Hills—1/9 each, posted.

GREENFINGERS FLORISTS
BOX 122,
OTOROHANGA

RUSSIAN COMFREY

(Webster Strain)

Plant now for future harvesting of this health-giving vegetable food with the following attributes:—

1. Permanency of stand.
2. High percentage of proteins, carbohydrates and minerals.
3. Low fibre content.
4. Palatability for stock, poultry and human consumption.
5. Large volume of self-acting Compost material.
6. Contains "Allantoin" a corrective for scour.
7. Reported to have good medicinal value for the following ailments:— Knitting of bones, stomach troubles, ruptures, exema, asthma, etc.

OFFSETS: 2/6 each, 10 for £1.
ROOTLETS: 6d. each.

Minimum order, 5/-.

Special reductions for large orders.

A paper on cultivation will be sent with your order upon request.

J. M. KING, 94 Shearman St., Waimate.

MINERVA

presents

BOOKS ON GARDENING FOR COMPOSTERS

HANDBOOK OF TREES AND SHRUBS FOR THE SOUTHERN HEMISPHERE.
R. E. Harrison 38/6
(350 illustrations, some in colour)

BRUNNING'S AUSTRALIAN GARDENER. Revised by Ernest E. Lord.
27/-
(186 illustrations)

CONCRETE IN THE GARDEN.
R. S. Duddle 10/6

Place your order NOW at—

THE MINERVA BOOKSHOP

49 Custom Street, East,
Auckland, C.1.

SOUND FLUORIDATION POLICY

The fluoridation policy of the Ontario Government as stated by the Health Minister Dymond is a sound and sensible one. The Government has taken the stand that until more is known about fluoridation it has no right to impose mass medication on the public.

In his statement Dr Dymond gave both sides. He was satisfied drinking fluoridated water reduced tooth decay among children under the age of 12 years. He was not satisfied that this justified fluoridating the water supply of the entire community and so forcing everybody—regardless of age and regardless of their opinions in the matter—to take fluoride into their systems.

He went on to state that certain substances occurring naturally in some waters may be desirable and would, in their opinion, be beneficial if added to those waters where not found naturally. Arguments could be advanced that the addition of these elements would benefit areas of our population. The principle, therefore, of permitting by statute the treatment of communal water supplies by adding substances other than those required for purpose of purification could be unending. If fluorides are introduced, why not other substances?

He said the Government stands firm. It will not ask or order or allow the municipalities to do anything more than supply their people with the pure, wholesome, germ-free water stipulated under the Health Act.

Dr Dymond pointed out there are other methods of giving fluoride to children than by putting it in everybody's drinking water. The policy clearly and firmly set forth by the Doctor forces no one to take fluoride himself or have his children take it, nor does it prevent them from taking it.

—"Globe and Mail" (Toronto).

INFLUENCE OF SOIL TYPES ON DENTAL DECAY

It is pleasing to report that at last the influence of soil types in relation to dental decay is being considered. In New Zealand the Medical Research Council as part of a major study is conducting an investigation throughout this country to ascertain the influence of the mineral composition of soils upon children's teeth and the prevalence of dental decay.

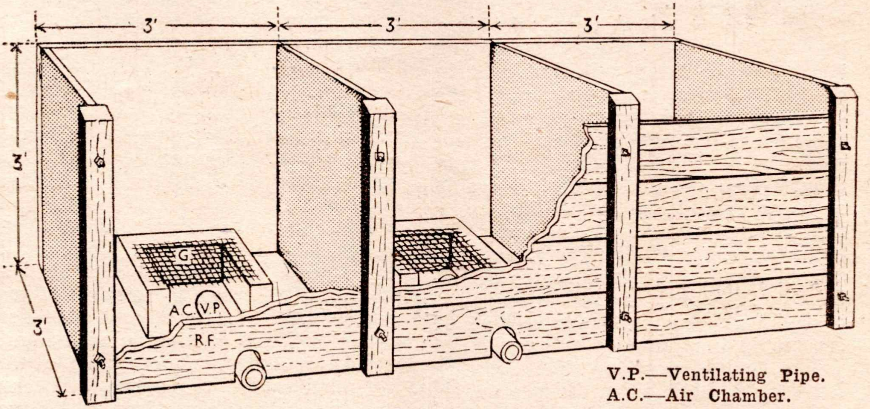
The soil survey which is being conducted in Napier, Hastings, North Auckland, North Canterbury, Taranaki, the Hauraki Plains, Wairoa and South Otago comes after pioneering work undertaken by a former dental research officer, Dr R. E. T. Hewat, which showed that the teeth of children living on certain types of soil in New Zealand were more susceptible to dental decay than the teeth of children living on other types of soil.

Napier and Hastings have been chosen as the site for part of the study because of some unexpected findings in the general investigation made during base-line dental examinations for the Hastings fluoridation scheme.

These investigations showed that Napier children up to the age of eight had less dental decay than children of the same age group in Hastings.

It would be a great advance if some leguminous crop could be found or bred which would do for the farmer of Africa what clover has done in Britain and in Australia. *(Sir John Russell).*

MOD-EN-AGE **Multiple Compost Bins**



V.P.—Ventilating Pipe.
A.C.—Air Chamber.
R.F.—Removable front cut away to show interior.
G.—Grid covering air chamber.

Simple to erect; supplied complete as shown above. Erected at site if required at slight extra cost.

MARTIN ORMANDY LTD.
41 Riccarton Road - Tel. 80-335 - CHRISTCHURCH.
V26

BOOK REVIEW by the Editor

It is my pleasure to review in this issue "Comfrey—the Wonder Plant" and the Henry Doubleday Research Association "First Gardeners' Report—Compost, Comfrey and Green Manure" by Lawrence D. Hills.

Members of the Society both here in N.Z. and overseas have shown a keen interest in this plant—many have it growing in their gardens—those who have not already done so could, with advantage, do so and use it to the fullest extent. It can be grown for domestic use, for the feeding of stock, for medicinal purposes, for Composting, or as a crop boost for potatoes. It is claimed that trenches lined with Comfrey before planting potatoes, will increase materially, if not double the yield.

Comfrey—the Wonder Food, published by Greenfingers Florists, Box 22, Otorohanga, N.Z., in association with and with the approval of the Henry Double day Research Association of England.

This booklet priced at only 1/- is a veritable mine of information on the subject of Comfrey and should be in the possession of every member of the Society.

Quaker Comfrey, the heavier stemmed larger leafed Comfrey (not Symphytum officinale) has, it would appear, established something of a reputation for relief in cases of asthma and the Henry Doubleday Research Association is desirous of obtaining further information on cures or relief experienced from asthma or eczema in any part of the world.

The booklet explains that Comfrey leaves are high in protein spinach, rich in minerals and vitamin A. The plant contains a substance known as "allantoin"; this is contained in the leaves in the summer months and in the roots in the winter when the plant is dormant.

Uses to which the leaves and roots can be put and recipes are included in the booklet.

For the farmer too, Comfrey is full of interest. It can be used for feeding pigs, poultry, horses and cattle, and it does prevent scour as well as having several veterinary uses also. Because of its balanced nature Comfrey is ideal as a precaution against bloat.

Our copy by courtesy of the publishers.

First Gardeners' Report—Compost, Comfrey and Green Manure by Lawrence D. Hills is a very interesting little booklet worthy of a place on every gardener's bookshelf. It contains much information both for the experienced gardener and the novice and is presented in a simple manner.

The chapter "Why and How to Make Compost" is quite comprehensive and gives some good explanations and advice. We note several references to the New Zealand box. Mr Hills advises that lawn clippings should be spread throughout the heap and used as a mulch around fruit trees in preference to putting in the Compost stack. I prefer to incorporate them in my Compost stack either mixed with sawdust or fibrous materials.

The carbon-nitrogen ratio is simply explained and the analysis of Composts made with different activators is given.

The chapter on Leaf Mould, Wood Ashes and Deep Litter Compost is very good and explains that leaf mould is best made by action of fungi rather than bacteria and therefore weeds, soil and garden rubbish should not be included. Those people who burn leaves for the ashes will learn that what they have left is 3.8 per cent, mostly potassium carbonate which washes away quickly after rain.

The building up of fertility by green manuring is explained and the correct time to turn under the resultant crop is given. Mustard and crimson clover are both dealt with.

The chapter on Comfrey gives useful information and deals with the planting, the cultivation, cooking and using the plant for Composting. That the facts as set out are not pure hearsay is proved by the various tables which provide the analysis necessary to show a point. As explained earlier in the booklet, the Henry Doubleday Research Association is not interested in statements but facts, and the author is to be complimented on this. and on the excellent booklet he has produced.

BOOK REVIEW by "Ngaio"

Brunning's Australian Gardener, revised throughout by Ernest C. Lord. 186 illustrations. Since Brunning was first published over ninety years ago the home gardener has seen many changes: new plants, new varieties of old favourites, improved methods of plant propagation and soil-less culture have superseded the older techniques. This new edition is designed to give instant access to accurate information on every conceivable garden question. There is a practical guide to the planning of the home garden.

Concrete in the Garden by R. S. Duddle. Many gardeners are unaware of the very wide range of both useful and ornamental work that can be carried out in this material. This little book is ideal for those, in group or state housing areas, who have the problem of laying their own paths and would prefer something other than the straight and narrow. Details are also given for various concrete mixes, for making retaining walls, garden ponds, pergolas, etc. In fact, for everything in the garden which can be made of concrete. Ideal for the person who has to be his own handyman.

Handbook of Trees and Shrubs in the Southern Hemisphere. 350 illustrations. Most gardeners will already know his previous Handbook of Bulbs and Perennials. This new volume is as comprehensive in its field as the first. Many years of research and study have gone into compilation of this book, which will be of equal benefit to gardeners in Australia and South Africa as well as New Zealand. Harrison has described 2,200 trees and shrubs, some briefly but all of them accurately. This is a must for every New Zealand gardener's library and Mr Harrison should be commended.

Books by courtesy of the Minerva Bookshop & Library Ltd.

Members and readers who wish to invest in a worthy cause are invited to send an annual subscription of £1 to the Henry Doubleday Research Association, 20 Convent Lane, Bocking, Braintree, Essex, England, who will in turn supply members with the Newsletters and literature on developments. This Association is entirely non-profit making and is only financed by donations and membership fees. The Honorary Secretary is Lawrence D. Hills. Members reside in many parts of the world and are really a team of amateur experimenters who ask Nature questions one at a time and who forward their findings to England for collation, study and publication.

Four research teams are operating at present. Those dealing with (a) Russian Comfrey in all its aspects; (b) the control of pests and diseases without chemicals; (c) Compost and green manure; (d) the study of Nature's "alarm bells" ringing with rising radioactivity.

A worthwhile cause!

DO YOU KNOW, DO YOU CARE, WHAT YOU ARE EATING?

by Laurence Easterbrook

How much longer are the mothers and housewives of Britain going to put up with the adulteration of their food that is spreading almost as quickly as the new influenzas?

This is their province. They are guardians of the home, the preparers of the food that sustains our bodies. Men are too full of airy-fairy fancies, such as visits to the moon and challenging the stars, to concern themselves with fundamentals. It is to women we must turn when something practical in the realm of the family has to be done.

Have you had your Asian 'flu yet? Have you paid your six-monthly visit to the dentist to have your teeth stopped? How are your ulcers, your indigestion, your constipation? What a wonderful old boy your Uncle Charles is—why, he hasn't been sick for years!

This is commonplace conversation in this enlightened age when man is prizing open the secrets of the universe and even staking out claims to outer space. We no longer expect to be well. Positive health is a fanciful idea. Instead we have created a national health service that floats on a sea of patent medicines surrounded by mountains of pills. Our intake of aspirin alone is ten million a day.

The distracted doctors have no time to think of preventing disease; they are worked to death trying to cure it. Fifty years of medical and social progress have quadrupled the number of patients treated by our hospitals and doubled the population of our asylums. Oh, lucky citizens of this Welfare State!

We know now that our bodies are constantly renewed and that this is done through a flow of nutrient materials from the soil through plants and animals. Surely it is obvious, therefore, that the first place where we should look for the failure of our bodies in health is in our agricultural and food-processing practices. We look, and what do we find? We find that there is hardly one single item of our food that is not subject in one form or another to practices inimical to its health or "wholeness" (which is the same word).

Our daily bread comes from flour from which the natural calcium has been extracted and chalk put in. Various chemical agents are used to bleach it. Some of the most nutritive part of the wheat is taken out and fed to pigs and poultry, and the germ is also removed and sold back to the public in synthetic form at some hundreds of pounds per ton. It was bought as part of the wheat at under £20 per ton.

Dr. R. F. Milton, perhaps our leading food analyst, says: "If vitamin E is really significant, then a diet that does not contain whole grains *must* (sic) be inadequate since steel roller mills completely remove the wheat germ oil from the flour."

So we have synthetic, medicated bread.

Nutritionally Irreplaceable

Our cows have been turned into milk-giving machines concerned mainly with quantity. Professor

This article, reproduced from "Mother Earth", originally appeared in the "News Chronicle" and while Britain is specifically mentioned we believe the facts apply equally to New Zealand and for that reason we publish the article in full.

Kaye points out that the result of that is a progressive reduction over the last 20 years of the solids other than fat in milk, the part in milk that is nutritionally irreplaceable. Even in districts where milk is produced it is now impossible to buy milk that has not been heat-treated, a process which a considerable section of the medical profession regards as disastrous to its value as a food.

We encourage battery eggs with their yolks of pale yellow from birds whose bones grow brittle in wire cages; we boost food products containing saturated fatty acids, acids that research workers, both here and abroad, are now associating with coronary heart disease.

Lead and arsenic are among the minor poisonous elements with which we saturate our orchards annually. There are others far worse, so virulent that the farm men applying them must wear special protective clothing. Market gardeners and nurserymen everywhere are having their crops wiped out by weed-killers and insecticides that come floating on the breeze from neighbouring farms. In Essex alone last year nearly 40 of them lodged official complaints. The poisoning of the countryside has become such a common occurrence that newspapers no longer report such cases unless there is some special feature about them.

The silly thing is that these sprays are not even fulfilling their purpose. They kill our friends as well as our enemies in the insect world, so that Dr. Massee, the famous biologist of East Malling Research Station, has had to admit that our worst troubles with pests in our orchards started when tar-oil sprays were introduced in the 1920s.

D.D.T. Forbidden

How lightheartedly we squirt the fly-spray with its ingredient of D.D.T. Yet even Chicago, not a squeamish city, has forbidden the use of D.D.T. in dairies and cowsheds. The cows absorb it; it passes into their milk; from there into us, where it builds up in our fat cumulatively, awaiting the day when we get ill and begin to live on our fat. Whereupon the poison is released into our bodies.

With equal abandon we throw around the penicillin. It was supposed to safeguard our cows from mastitis. Instead, they become immune to penicillin, but it leaves a residue in the milk, to be drunk by a population of which 1 in 20 is sensitive to the drug. In some cases penicillin has killed cows, because it killed the streptococci, thus leaving the way clear for the far more lethal staphylococci.

That can happen to us. I myself was affected, as the doctors afterwards admitted. Antibiotics killed the harmless bacteria which normally hold in check the more harmful organisms. Brought up on an outdated theory about germs, we have become terrified of the smaller organisms, particularly the less visible ones. We see life as an obstacle race against them, with the odds in their favour.

In our blind ignorance we therefore think we can cosh the realms of nature and kill what we do not like. If such wrong thinking is persisted in for long enough, it is not inconceivable that we might lose the battle and be spewed into the limbo of forgotten history.

The latest idea is to implant into bullocks a drug called hexoestrol derived from a cow's ovary in order that the animal may put on flesh more quickly.

It is known that repeated doses upset the normal reproductive cycle and lead to cystic ovaries and infertility. The butchers are mostly against it, because they consider it lowers the quality of the meat. Farmers are warned against using it on breeding stock. But are not we, who eat the meat, breeding stock? It is true that experts are saying there should be no danger to human beings provided we do not implant too much.

What guarantee of this in practice could there be? Who is going to believe "the experts" in such a matter after Windscale? In any case, no one can possibly be sure of such a thing until it has been tried over several generations.

Similarly with pigs, for which on many farms antibiotics have become a normal part of the ration. The same people who warn farmers not to use them for breeding stock cheerfully assert that there is no danger to those who eat this chemically boosted bacon. How can they possibly know in the short experience of this practice?

It is time we took a stand against this nonsense which, I believe, is having such terrible results in the toll of ill-health that is filling our hospitals and bringing tragedy and disease into so many lives.

Will the Ministry of Health never stir itself from its old-fashioned rut and throw even one-tenth of its resources into finding out why more people do not enjoy positive health? Then it might be worthy of its name. At present its defeatist outlook would qualify it better for the title of Ministry of Disease.

ONE OF NATURE'S MARVELS

The soil is among nature's greatest marvels. A clod of earth, seemingly simple and lifeless, is now known to be highly complex in structure, its particles most elaborate in their composition, with numerous invisible crevices inhabited by prodigious numbers of living organisms, inconceivably small, leading lives of which we can form only the haziest conception yet somehow linked up with our lives in that they produce the food of plants, which constitute our food, and remove from the soil substances that would be harmful to us. . . . Experts in many scientific subjects have spent years in studying the soil and vast numbers of learned memoirs have been written about it . . . yet each worker would admit that he or she is only on the fringe of the subject. What is still unknown is immeasurably greater than what has already been discovered—Sir John Russell in "The World of the Soil".

PLANTING TIME AFFECTS SOYBEANS

If you have been wondering whether delaying the time of planting will cause any effects in soybean seed, it will. This information comes from F. Dimmock, and F. S. Warren who have been running tests on this very thing at the Central Experimental Farm, Ottawa, Canada. The results of tests which were run to determine the influence of planting time on the yield and composition of soybean seed showed that if planting is delayed the yield of seed will be decreased. Also, the oil content of the seed will be decreased. However, strangely enough, the longer that planting is delayed, the higher the protein content of the seeds will become. This looks like you should plant early if you want the highest yield and the highest oil content, which would be desirable if you intended to sell the seed for oil extraction. On the other hand, if you intended to use the seed for stock feed, it might be more desirable to have a high protein content. In this case, planting late would be better although the yield would be somewhat lower.

—"Organic Gardening & Farming"

A FRUITGROWER'S WILL

(With apologies to Philip Woodruff)

When my body's worn out
Don't bury it, please,
In a place with white crosses
And of sad little trees.

Put it in the orchard,
Under two spits deep,
Where the worms come and wriggle
And tender rootlets creep.

Where the salts and acids,
Phosphates and the lime,
Will make well-flavoured apples
At apple-picking time.

And when the pickers come
One bright autumn day,
"That tree's a very good one,"
Is what they all will say.

—Sent by C.E.G.

For the New Member

GARDENING IN SAND

People are now growing vegetables who previously have never given the faintest thought to gardening; but already amongst these new members are many who find the gardening game most interesting. Quite a number have confided that their greatest difficulty is to find out just how to put their soil into suitable condition.

Add Organic Matter

If tough soil is well drained, it can be brought to a good mechanical condition by working in light sandy soil or plenty of organic matter, such as stable manure, Compost, and thoroughly rotted vegetation — lime will also help considerably to make these tenacious soils mellow and easy to work. Once they have been brought to a favourable mechanical condition these heavy soils produce good crops without much further trouble excepting the replenishing of the plant food, which is drawn from the soil by each crop and can be replaced by regular applications of quality Compost.

With the sandy soils things are not so easy, because the absence of any subsoil means that most of the fertilisers used are washed away down into the depths beyond the reach of the roots of plants. Also the sharp nature of the sand is responsible for the cutting up of the organic matter we are able to supply and which is becoming more scarce.

The best way to attack the sandy soil problem is to mark out the beds, then throw out the sandy stuff from each bed to a depth of about 18 inches, and spread a 3 inch layer of clay on the bottom to take the place of subsoil and to retain to a reasonable depth the manures and organic fertilisers that can be added from time to time. Having laid this foundation, the beds should be filled up with a mixture of cow manure, some heavy soil if obtainable, and a little of the sandy, natural soil.

A Compost bin is practically indispensible in sand-hill gardens—the bin can be made in a corner and camouflaged by shrubs or a trellis on which climbers can be grown—it can be lined with bricks if so desired, but this is not altogether necessary. Into the Compost bin goes all the vegetable waste from the kitchen, the lawn clippings, and all the waste matter from the garden itself.

When about to use, remove all the rough stuff, then screen the remainder using the fine stuff that goes through the screen and throwing the rougher material back into the bin for further rotting. An oblong wooden frame, on which some canary cage netting has been stretched, makes an excellent screen when propped up at the desired angle. The Compost is thrown up near the top of the screen and runs down the finer stuff going through, and the rougher remains on the near side to be returned to the bin. This valuable humus is rich in the elements necessary to plant life, besides which it encourages the activities of friendly bacteria in the soil.

Soils that are sandy and contain plenty of humus will grow the best crops of all. The presence of humus does away with that greasiness often associated with sandy soils, which prevents water from entering. Humus also holds sufficient moisture in the soil for a much longer period; therefore it is easy to see why everything of vegetable origin should be saved, Composted and not wasted.

In sandy soil it is better to keep the surface of each bed about level with the surrounding paths rather than to raise the beds in the manner so often seen. The reason is obvious—it permits the moisture to penetrate these sandy soils far easier, and as drainage on these sandy reaches is always good, there is no reason for raising the beds in the manner recommended where the soil is of a heavy nature.

From the Reader's Point of View . . .

Under this heading we are pleased to publish readers' viewpoints. No responsibility can be accepted for the ideas expressed and readers who disagree are invited to do so. Letters must of necessity be brief and we reserve the right to abbreviate, delete or not publish any matter considered unsuitable.—Editor.

CONTROL BY ORGANIC METHODS

Sir,

I would like to ask readers of your excellent magazine whether they can tell me to what extent leaf curl on peaches and codlin moth on apples can be controlled by organic methods —plenty of Compost and no sprays or artificial manures. I am experimenting along these lines and would be glad of any helpful advice.

—J. W. LEWIS

P.O.Box 36,
Manurewa,
Auckland.

CHANGE OF NAME

Sir,

Referring to the last annual meetings request for an expression of opinion from members and branches on the question of a change of name for our society. I agree that the suggested change sounds quite good, but I fail to see any marked advantage resulting from it. I cannot see any reason for a change.

We have built a world wide and respected reputation on the name Compost and to change it, is going to cause some confusion and inconvenience to many of our overseas connections. We have been, and still are quoted as an authority on organic soil culture by most if not all organic apostles in Australia, South Africa, U.S.A., Britain, India and other countries.

Moreover, in the fast growing demand for the utilisation of town and city sewage and garbage, composting, by some method, is the most hygienic and complete method yet devised. I think it will ultimately prove the most economical.

A name which served the late Sir Albert Howard and still serves Lady Howard, Lady Eve Balfour, Sir Stanton Hicks, J. I. Rodale and others as a definite description of a scientific process should not be lightly discarded, specially in face of its world wide acceptance as such. Personally I am proud to be a Composter and to be known as an enthusiastic advocate of the method. I see no necessity to change our title and would be extremely sorry to have the word Compost deleted.

—F. C. COOPER,
Immediate Past President, Dunedin.

[Editorial Note: The suggested name is the Organic Soil Association of New Zealand.]

APPLE PRODUCTION

Sir,

In the October COMPOST appeared an article mentioning that the cost of spraying apple trees (Granny Smith) had worked out at 2/11 per bushel. On the total cost the yield worked out at 110 bushels per acre. My one and only Granny Smith produces over four bushels per year and allowing 120 trees per acre would give a total of nearly 500 bushels. The lowness of the Australian figure so surprised me that I made enquiries.

The states with the lowest yield are Queensland and Western Australia with 115 bushels per acre. The best Tasmanian crop for the past four years was 205, the overall average for Australia was 170 bushels per acre.

In New Zealand the lowest returns come from North Auckland and Otago 350 bushels, Hawke's Bay the highest where orchards have yielded up to 1,200 bushels. Nelson-Motueka average out 600 to 800 bushels per acre. The above information was received over the phone and may not be strictly accurate.

—GIDEON PALMER,

RUSSIAN COMFREY

Sir,

Reference has been made in "Compost" to Russian Comfrey. When I lived in England I had a very painful poisoned finger. A farm labourer saw it and brought me roots of English wild Comfrey with instructions to scrape the root and apply as a poultice. This I did and the sore healed at once.

—Mrs Ella Robertshawe.
Dannevirke.

SWEETER GRAPES

A report from James M. Beattie, Ohio Agricultural Experiment Station, Wooster, shows that pruning affects the nutrient content of grapes. Beattie tried pruning grape vines at 5 degrees of severity. Grapes from vines that had been pruned the most had more sugars and less acid. According to the results of this research, gardeners can grow sweeter grapes by pruning their grape vines more severely.

—"Organic Gardening & Farming"

FRUIT JUICES for SUMMER DRINKS

Lettuce juice is a good source of iron, being richer in this respect than grapes, spinach or raisins (writes C. E. Clinkard, M.B.E., in "Here's Health").

The magnesium, too, in lettuce juice has great revitalising powers, particularly in building up muscular fibres, nerve centres, brain cells and lung tissues. It also assists in maintaing the normal fluidity of the blood, without which normal metabolism could not continue.

Lettuce juice has also a good iodine content and possesses a fair proportion of five vitamins. It also contains more than 9 per cent. phosphorus, which is the essential brain food, and 8 per cent. silicon, which with sulphur and phosphorus are necessary for the proper maintenance of healthy skin and hair.

Its excellent tonic properties make lettuce juice of remarkable value in anaemia, nervousness, acidosis, insomnia, catarrh, headaches, obesity, urinary disorders, rheumatic ailments, tuberculosis, goitre and dropsy.

Lettuce juice can be taken alone but is more palatable if combined with carrot juice in the proportion of two parts carrot juice to one part lettuce juice. From 1 to 6 pints of this combination can be taken daily. Do not wash lettuce leaves in hot water nor leave them to soak in cold water as this draws out the minerals.

Orange Juice

The juice of the orange is one of the most palatable natural juices in existence and it is also one of the most beneficial. Its value is widely recognised nowadays and its advantages for babies and growing children have been clearly established, especially on account of its power to assist in bone and teeth formation and in preventing rickets.

In orange juice there is a good percentage of fruit sugar and a high percentage of Vitamin C. In fact the entire daily requirement of this vitamin is contained in 3½ ozs of orange juice. It is also an excellent source of calcium and phosphorus. As a blood cleanser orange juice is well known, but it is also valuable in fevers and influenza, anaemia, asthma, bronchitis, catarrh, obesity, acidosis, high blood pressure, diabetes and arthritis.

Taken by itself without other food of any kind, it will supply all the needs of the body for two or three days and quickly cleanse the system of all poisonous toxins.

* * *

FILMS FOR BRANCH MEETINGS

Early next year we hope to publish a list of the most suitable films for showing at Branch public meetings. Each film listed will contain a brief description in addition to its title and length of time of showing, plus remarks by Mr Bristow (President of the Wellington Branch) who has kindly offered to undertake this survey for us.

From the Editor's Mailbag

A newsy letter from an old friend, "the Man of the Trees" Richard St. Barbe Baker, who, by the time this is printed, will be resident in the Mackenzie County in New Zealand. We wish to congratulate him on his marriage to Catriona Burnett, daughter of the late Thomas Burnett, M.P., and wish them every happiness.

They will live on a 30,000-acre sheep station, and Mr St. Barbe Baker will have with him his two children by a previous marriage, Angela 2, and Paul, 9.

He writes: "I shall be going to live at Mount Cook Station in the Southern Alps, surrounded by the most glorious mountain scenery. I am convinced that New Zealand is a grand place for young people and both Angela and Paul are as keen as I am to settle there.

"Our President, Lord Bessborough, is making a home for the Men of the Trees at his beautiful home, Scransted Park, Sussex."

★ ★ ★

From South Africa comes the journal of the Organic Soil Association of Southern Africa, Box 7736, Johannesburg. This is a 36 quarto page duplicated magazine with an art paper printed cover bearing the title of the organisation, address and the slogan "Good Soil—Good Food—Good Health".

I must admit that I found this journal most interesting and stimulating, so much so that when I commenced to read it I put aside what I was doing and continued until I had finished it. It has variety, poems as well as prose, and can be enjoyed over and over again. If subsequent issues are up to this standard, they will always be most welcome.

★ ★ ★

PERENNIAL TOMATO

From South Africa one of our members writes concerning his propagation of a tomato which he describes as a perennial tomato that will last more than one year and witstand the rigors of frost. He continues: "I am busy vegetatively propagating it to get a true type offspring. I crossed five varieties to get this freak (muternt). The crops are two per year, flavour mild, not too acid. Fleshy, not too many seeds and a fairly thin, delicate skin. I grew my test plants on the ring culture system. It works very well in this part of South Africa. I use Dutch Peat Moss in trough below rings and a weakly nutrient in solution, Compost water and manure water in alternate weeks. I'll send you some snaps soon."

This sounds rather intriguing and will be rather a sensation. We have purposely not given our friend's name for he is not seeking undue publicity just now—that will come later. We do want to congratulate him on his initiative and enterprise and wish him every success.—Editor.

The first edition of the Oamaru Branch Newsletter is a welcome addition to the Editor's Mail Bag. The Newsletter is a double sided foolscap sheet and deals specifically with Branch activities, and gives good coverage of addresses given by Guest Speakers at public Branch meetings.

It is pleasing to learn from the Newsletter that the Oamaru Branch now contains 65 financial members, and that these include three life members and 18 farmers. This is a most creditable achievement and the proportion of farming members is most encouraging. Other Branches could well emulate the example of Oamaru in this respect. Credit should also be given to this Branch for sending three delegates to the annual meeting in Nelson, a fine effort for such a young Branch, and although reference is made to this in the Newsletter, no mention is made of the fine showing made by the delegates, Mesdames H. Leaman, E. Liddell and A. Currie, who acquitted themselves with no little distinction; nor is any mention made of the Editor of the Newsletter who is Mr Barraclough.

Two brief extracts:—

"At the June meeting, Mr C. Robb of the Unevangelical Fields Mission Papua, told how those natives who practised a form of organic farming, by digging in grass, weeds, etc., were healthier, and of finer physique than those who did not adopt this method. Dealing with food he said that only wholemeal flour and brown rice were allowed into the territory for the native people."

"August saw the return of Dr Abraham who spoke on Article I of the World Health Organisation. He emphasised that Health consists of three phases, Mental, Physical and Moral. He dealt at length with the problem of dental caries and also made the following observations. D.D.T. is a toxic poison of the liver, and the spray takes 25-50 years to work out of the soil. Fluoridation—The Maoris used the same water from the same source as we do and they were considered to have the best teeth and finest physique of all native peoples."

★ ★ ★

"COMPOST! WHY?" is the title of a four page folder received in the mail. This is an admirable effort and was put out by the Hawke's Bay and Napier Branches for the recent show effort. The Compost Society history is briefly outlined and the advantages of making and using Compost is set out in a clear and concise manner. The Cycle of Life block on the front cover is most eye catching. Congratulations on a job well done!

Mrs J. F. McDuff, Secretary Oamaru Branch, reports that the Branch conducted a stall at the Weston Flower Show and at the Maheno Presbyterian Flower Show. Much interest was taken in the exhibits which included samples of Compost in different stages of maturity and samples of Compost grown vegetables. Literature was much in demand.

★ ★ ★

MUNICIPAL COMPOSTING

It is pleasing to learn that the South Canterbury Branch has been active in publicising the case for ultilisation of sewage and garbage in Timaru. Letters in the local newspaper by the Secretary, Mr C. S. Gordon, and Mr A. S. Kinsman, an executive member, would create much interest and we hope have a successful bearing on this important issue.

TREE SEED COLLECTING, MEXICO

"Two professional foresters, have left New Zealand on a five-month tour of duty in Mexico," stated the Minister of Forests (the Honourable E. T. Tirikantene) in Wellington recently. "The purpose of their visit is to procure trees seed for large scale experimental testing in New Zealand forests.

"Mexico is undoubtedly the greatest potential source of new exotic pine introductions available to New Zealand in the world. Mexico has a diversity of tree species of which botanists have been able to identify 38 species of pines and 25 varieties and forms. (There are close to 100 species of pine in the whole world.)

"The procurement of reliable tree seed from Mexico has been a problem to New Zealand and other interested countries for many years and with the planned expansion of the exotic forest estate by two million acres by 2025 A.D. the Forest Service considers it a duty to seek to improve the range of New Zealand's existing exotic forest species," stated the Minister.

—N.Z. Forest Service Newsletter.

Nutrition and Health

(From Page 6)

the germination rate is also higher. The extension of our work into available trace elements shows that a very high level of iron exists in organic form in fields high in humus. This may have some bearing on enhanced growth-promoting properties in such soils.

The Haughley Experiment has now proved that differences occur in both *quality and quantity* of farm produce according to the way the land is treated. For instance the availability of iron was more than double in the Organic Section than the other Sections in 1957 and in Organic fields reached 250 p.p.m. which was four times that of the Stockless Section.

What nutritional significance this is to the consumers of the produce has still to be worked out but let us digress to consider some points.

1. Cell Nutrition—R. F. Milton. All cells contain many enzymes, i.e. substances which initiate and catalyse chemical reactions within the cell. A cell may be likened to a bag of enzymes, and indeed, a single liver cell contains fifty thousand enzyme units.

2. Reported by Elizabeth Von Barsewisch—(Journal of the Soil Association, October 1958). Professor A. I. Virtanen of Helsinki reported to the German Society for Nutrition, April 1958, at Mainz, on the occurance and significance of antibiotic substances in cultivated plants. It seems that plants contain substances which act as protection against fungi and microbes for the plant itself and which are also effective when used as medicaments in the treatment of animal and human diseases, extending protection to the consumer when ingested in daily food. The highest content of antibiotics in plants seems to have been found in species that have a very strong scent or aroma.

3. Dr. J. M. Pottenger Jnr. reported his experiments on feeding cats on cooked or raw food. (American Journal of Orthodontics and Oral Surgery, August 1946, Vol. 32, No. 8, and further reports on Dr. Pottenger's Experiments in "9,000 Mile Research Tour through U.S.A." by Lady Eve Balfour). His experiment involving some 900 cats showed that the nutritive value of various milks varied enormously. By far the best being raw milk, followed by pasteurised milk, then dried milk and worst of all sweetened condensed milk. The nutritive value of the cat excreta as a manure for plant growth also varied in the above order according to how the cats were fed according to showed how the excreta of the raw milk fed cats detoxicated the harvest of beans from the smell of cat dung, this did not occur with the excreta of the cats fed on the other milks. I quote from him: "The principles of growth and development are easily altered by heat and oxidation, which kill living cells at every stage of the life process, from the soil through the plant and through the animal. Change is not only shown in the immediate generation, but as a germ plasm injury which manifests itself in subsequent generations of plants and animals.

4. The late Dr. Weston A. Price, an American Orthodontist, travelled all over the world making contact with those people on this globe who were reputedly healthy when not in contact with our modernised civilisation and what happened to them when this contact was established (Nutrition and Physical Degeneration—Price). His studies took him to the Pacific Islands, North and South America, Africa, New Zealand, Australia, etc. His conclusions were that a marked mental and physical deterioration occurred when the natives regularly ate the civilised man's food—white bread, refined sugar, tinned foods, etc. His works should be a compul-

sory part of medical education. I would like to state here that I have examined many thousands of upper dental arches in my patients over the last fifteen years with a view to confirming some findings of Dr. Weston A. Price. I have found the shape and conformity of the upper dental arch in relation to physical and mental health a most interesting study in general practice and I concur with his findings.

5. Taken from an account in the Journal of the Soil Association, October 1958, of a lecture given by Dr. Gustav Rohde, head of the Department of Humus Farming and Compost-making of the University of Gardening and Landscape Culture at Humbolt University, East Berlin: A most important point I must make is this: Compost is just as necessary inside the animal as in the soil; indeed we find that the composting of animal food is vital. Moulds improve the food value of composted organic matter for bacteria and other micro-flora and fauna, even for our domestic animals such as cows, horses, sheep, dogs and poultry, which are attracted by the refreshing smell of yeast and new bread as well as by the distinctive flavour of composted and coarse ground cereals and forage. These observations have led, in the German Democratic Republic, to the development of the so-called Futter-Verpilzung (composting of feed and forage) a new method of raising the food value and digestibility of feeding stuffs by increasing their content of microbes rich in metabolic activators. He later goes on to say "the health and growth of young animals benefit particularly; the milk production of the cows can be increased considerably; and the quality of eggs for hatching is improved.

Conclusions—Firstly, it has to be realised that as regards the nutrition of plants, animals and man we are only beginning to get a grasp at the fundamentals. With thousands of enzymes in a single cell and that cell endeavouring to co-ordinate its function and vital life to its immediate and ever changing environment I doubt whether the human brain will ever really understand the complexities of the living organism.

Secondly, on a similar basis that certain organisms secrete chemicals such as the antibiotics for their protection and survival, plants do likewise. If as has been mentioned this protection against fungi and microbes is passed on to the consumer in his foods then a reappraisal of the types of food consumed, the method of its production and its handling would assume great importance.

Thirdly, it has been shown that in many instances worthwhile conclusions can only be arrived at when experimentation is carried out over several generations of a species.

Fourthly, Dr. Weston A. Price has produced the evidence that our modernised food supplies are causing a deterioration in the human species and no doubt the full effects will be seen in the generations still to come. I might mention here that the primitive Maori was reputed to have the finest teeth and physique of any race in the world.

Fifthly, although man is capable of existing on sterile food it appears that the vitality and well being are much improved by consuming organisms beneficial to him. It would appear that the encouragement of certain species of non-pathogenic varieties acts as a check to the more virulent pathogens. We are all aware of the increased trouble with staphylococcus aureus likely due to the imbalance caused by inadvertantly reducing the staphylococcus albus numbers by using antibiotics.

In Topley and Wilson's "Principles of Bacteriology and Imunity" in their chapter on "The normal flora of the Human Body", it says: "Moreover, equilibria exist not only between host and 'normal' flora, but between the different species within the flora;

and the association of various bacterial species on a given surface of the body is relevant to any discussion of infection. It cannot be too strongly emphasised that none of those regions of the body, to which bacteria can gain entrance by the normal portals, provides a virgin soil in which any newcomer may flourish. It is just as impossible to ensure the proliferation of a particular species by introducing it into the mouth, as it is to ensure a crop of a particular plant by scattering seeds in a field already occupied by a pre-exising plant association. The newcomer will have little chance of survival unless it is adapted to occupy some definite place in its new environment."

On the farm it is just this state of equilibria the organic farmer is endeavouring to establish and by so doing to improve that state of health and well-being of soil plant, animal and man. The medical profession will look forward to further results from the Haughley Experiment which has become another landmark in the struggle for better health.

CONGRATULATIONS !

A former Dominion President for a number of years and at present a Vice-Patron of the Society, Mr D. M. Robinson, F.N.Z.I.M., at time of writing is leading by a majority of some two hundred votes in the contest for the Auckland Mayoralty. If he remains in the lead, Mr Robinson will become the second Mayor of Auckland who has been an active Composter. (The first was the late Mr T. W. M. Ashby, O.B.E., who died in office.)

Members will, I am sure, join with me in wishing Mr Robinson all success in the final count and a happy and successful term of office.—Editor.

In most industrial countries of the world wood is being used faster than it is grown.

For that

CHRISTMAS PRESENT

what could be better than a

Two Year's Subscription for

"COMPOST"

The recipient will be delighted

Send name and full address, together with that of the sender, with £1, to your branch secretary.

SUNLIGHT BOOSTS VITAMIN C IN TOMATOES

Vitamin C content is materially higher in tomatoes that are grown in direct sunlight, says plant scientist G. B. Brown, Cheyenne Horticultural Field Station, Wyoming. Experiments which have been conducted on growing tomatoes in both shade and sunshine show that shading tomatoes for as long as nine days before harvesting, will significantly decrease the amount of vitamin C. Tomatoes grown in direct sunlight have also been found to have a better colour and much better flavour. Tomatoes are the most profitable crop that can be grown in a small space by the gardener. The gardener who grows his own tomatoes can be assured of higher quality, more healthful, better tasting fruit.

—"Organic Gardening & Farming"

STACK INSTEAD OF HEAP

The use of the word STACK in regard to Compost was made by a speaker at a recent meeting of the Canterbury Branch . The word stack, implied carefully putting materials together and should be used in preference to the word HEAP.

Our Branches Report . . .

Branch Notes should be sent direct to the Editor, Compost Magazine, 875 Ferry Road, Christchurch, on or before the 6th of the first month of publication and should be written or typed on one side of the paper only.

CANTERBURY BRANCH

The President, Mr G. S. Maslin, extended a welcome to Mr and Mrs J. S. Yellowlees of Nelson and Mr J. A. Gagliardi of the Otago Branch at the September meeting.

The speakers for the evening were two Executive members, Messrs E. J. Cross and G. S. Maslin who presented book reviews.

The opening speaker was Mr Cross who reviewed the book "Natural Gardening" by J. E. B. Maunsell.

By word of explanation Mr Cross said that the author of the book had had 30 years of gardening experience. Fifteen of these years had been spent in gardening with the aid of chemicals and the latter part of this term had been spent gardening organically. The soil originally had been largely clay. Now Compost was his business agent and his garden fork was his cultivator. There was no waste material in his garden claimed the author who stated that by applying a layer of Compost some two to three inches thick he had obtained two to three crops a year. Leaf mould was an ideal winter protection for biennials and he used it extensively. Mr Maunsell, said Mr Cross, believed in feeding the garden and not in fallowing it. Rather than fallowing an area he planted a green crop and Composted it.

The importance of mixing soft grass clippings with coarser materials was stressed by Mr Maunsell in his book who advised would-be Compost makers to use a separate dustbin for collecting refuse for putting on the Compost heap.

Leaf mould was not a carrier of disease. Kew had been using leaf mould for the past 150 years without disease. Crops planted under fruit trees should be harvested before the trees bore fruit. Compost made a good top-dressing for lawns but they should first be well aerated with the aid of the garden fork then the Compost spread over the surface.

Before Mr Maslin started his review, Mr D. Foley spoke briefly on the use of Plaster of Paris in the garden. He claimed great interest in the subject but explained that he was far from knowing all the answers. He explained that Gypsum gave good results when applied as a manure to roses and he told of areas of land inundated by the sea that had been brought back into full production within two years by the application of some hundreds of tons of Plaster of Paris. History told of the use of Plaster of Paris as a manure for improving soil as early as the 19th century. It was beneficial in clay soils and aided in wheat growing. The dusting of grapevines with Plaster of Paris prevented mildew of vines. Grass grub in lawns could be defeated by the use of Plaster of Paris.

In reviewing the book "The Stuff Man's Made Of" by Jorian Jenks, Mr Maslin stated that Mr Jenks was converted to Organic ideas through his contacts with Sir Albert Howard and others. He has been connected with the land for 40 years and is Editorial Secretary of the Soil Association.

In his book Mr Jenks discussed the startling increase in degenerative diseases in the last 50 years, and points out that to understand disease we should first study health. There was only one common factor influencing relatively healthy communities—wholefood diets.

The development of technical efficiency at the expense of Biological efficiency has destroyed many sources of whole food and has thrown our civilisation out of balance.

The chemist, who has shaped the course of Agriculture for 100 years, has become too much of a specialist in his work, and tends to be out of touch with the work of other specialists and with the wholeness or oneness of Nature.

The writer goes on to discuss the rise of the Organic Movement dealing with Howard, who advocated a return to the Study of Nature as a whole. Among thse were Dr Rayner, Robert McCarrison, Dr Pottinger, Dr Wrench and others. Far sighted farmers were F. C. King, Rodale, Sykes and Turner. Then came the formation of the Soil Association with its Journal "Mother Earth". This, with the Haughley Experiment organised by Lady Eve Balfour attempts to compare the relative merits of orthodox with organic agriculture, and promotes the concept of soil fertility and its relation to human health.

The book ended with a look at the future, and showed the vital part that an enlightened Agriculture can play in saving Mankind from the chaos which at present threatens.

FILM EVENING

The Chairman welcomed members to the meeting, especially those new to the Society and introduced to members the "Farm & Garden" magazine which is an English magazine dealing with matters of interest to the organic movement. Members who wished to take up subscription were asked to obtain further details from the Secretary.

Name of Society

Mr John Thompson, who was a Branch delegate at the annual meeting, then gave members some of the background to the discussion at the annual meeting which lead to a notice of motion to the effect that at the next annual meeting of the Society its name be changed. Delegates at that meeting were expressly requested to refer this matter back to their branches so that the matter might be discussed and delegates to next year's meeting be guided as to the feelings of the various branches. Mr Thompson explained that the feeling at the annual meeting was that the present name was restrictive and could be the contributing cause of the difficulty being encountered in enrolling new members, particularly farmers. The suggestion is that the magazine of the Society retain its name of "COMPOST", even if a change of name is decided upon. After some discussion it was resolved on the motion of Mr Parton, seconded by Mr Thompson: "That this meeting gives favourable consideration to a change of name."

Films

The following films were then screened:

"Winter Work in the Garden".

"Waimakariri — River from the Snows".

"France is a Garden".

A vote of thanks to Mr Betteridge who acted as projectionist was carried by acclamation.

—L. F. SHALDERS.

FIELD DAY

Recently, a most enjoyable afternoon was spent by between sixty and seventy members and friends when a conducted tour was made of the Ashley State Forest. The guide was Mr W. S. Hopkins, who pleasantly and informatively answered our innumerable questions.

Starting out from the camp Mr Hopkins lead us up the long, steep, winding roads through the forest, several stops being made to point out items of interest. Among these we found that the taxpayer is the owner of 12,500 acres, half of which is planted in about 30 different varieties of pinus, eucalypti, poplars, Douglas fir and larch, all of which are in demand for timber used in many different ways.

The forest was started 20 years ago, and so far no large scale milling of timber has been done, except for logs from thinnings, which are being sold.

The nursery for growing young stock is now situated on 13 acres at Rangiora. This nursery made available last season two million young trees grown from seeds and cuttings, and next year's target is for double that amount.

Trees are planted out at 1,210 to each acre on a heavy clay soil and it is no mean feat to struggle up some of the steep hillsides with a large bundle of young trees for planting in addition to the necessary tools, etc.

Mr Hopkins told us that they have 41½ miles of metal roads through and around the forest, and about nine extra miles are bing formed each year.

Sixty men are employed as staff and it certainly looked like a full-time job with such a vast area to be covered from base camp to the lookout station at 1360 feet. This was where we unpacked our picnic baskets to have afternoon tea.

From this lookout most of the forest can be watched by the man on lookout duty. This lonely man remains at his post for six months of the year and not anyone in our party envied him his most responsible job. During wet weather he is allowed down for a break.

The water supply for the various uses at the camp comes from a well 388 feet deep and as no pump will draw water from such a depth it has to be blown up with compressed air —so next time you turn on your tap to draw your bath water from the town supply, think how lucky you are.

At the conclusion of the round trip our Chairman, Mr G. Maslin, thanked Mr Hopkins for giving up his afternoon to do such a splendid job of showing a bunch of "townies" just what can be done on such rugged country.

Mr Hopkins said it had been a pleasure and on behalf of the officer in charge (Mr T. E. C. Bridge), and himself, extended an invitation to visit the forest again.

Some figures are appended here for the benefit of members:

Planting is carried out each year at approximately 300 acres per year. Last year 10,500 cubic yards of metal was spread on 41 miles of road.

Main varieties and acreages are:

Pinus radiata (insignus),	2660 acres
Pinus laricio (Corsican pine),	980 acres
Douglas fir (oregon),	800 acres
Larch	340 acres
Eucalypt-macrocarpa mixture	105 acres

—W. T. WAINMAN.

SOUTH CANTERBURY BRANCH

LARGE SCALE COMPOSTING

Our October meeting was well attended, the address, illustrated by slides, being given by Mr Trevor Ross of Palmerston, his subject being "Large Scale Composting". Mr Ross described his Composting methods, the chief materials used being sawdust, fowl manure from a large producer and town refuse, one thousand tons per year being manufactured.

A field day at the Timaru Gardens had to be postponed on account of bad weather. It is hoped to arrange this for a Saturday in November.

As a new sewage scheme for Timaru is projected our Branch is doing all it can to persuade the City Council to consider Composting town refuge and sewage sludge. The John Thompson Industrial Constructions Ltd., 2 Princes Row, Buckingham Palace Road, London, who are experts on the disposal of town wastes, and who built the Bangkok scheme, are willing, if provided with certain information, to furnish, at no cost to the Council, a scheme plan with costs for any local authority.

FIELD DAY

On Saturday, 7th November, 34 members and friends made a bus trip to Palmerston to inspect the property of Mr Trevor Ross, who for sixteen years has been farming without artificial manures, but making and using compost at the rate of one thousand tons per year. The materials used are chiefly sawdust, fowl manure and town wastes. This is mixed by bulldozer and requires about twelve months to mature. Dressings of from 5 to 20 tons per acre are used to maintain and increase fertility. Cultivation is by the contour system, but the mould board plough is not used.

One of the most interesting things we were shown was the restoration to fertility of a steep hillside by the use of the chisel plough. In successive years the chisel plough cut narrow furrows along the hillside, tearing out the turf and leaving this to disintegrate on the surface. Seed sown broadcast found its way chiefly into these furrows, which in successive ploughings were made three, five and seven inches deep. The furrows along the side of the hill caught all surface moisture, while the seed tended to be covered by the soil from the torn-up turf. The third ploughing was yet to be done, but we noted the grasses and clovers germinating successively. It was though that a permanent pasture would result.

On our return journey we visited the farm (also run on compost lines) of Mr H. J. Leaman at Kakanui, where we saw crops being grown without artificial manures, the deep green colour of the wheat crop being most noticeable. A large compost heap was also inspected. Here we were entertained to afternoon tea.

It was a day well spent and we are greatly indebted to Mr Ross and to Mr Leaman for their hospitality.

An extra meeting of the Branch was held on 11th November when we were addressed by Mr J. K. Edie, a member of our branch, on "Soil, Fungi and Bacteria". He was listened to with close interest. Some of the points made by him were:—To convert sand into soil, soil bacteria and fungi must be present. Success in absorbing and retaining moisture depend on the presence of aerobic bacteria. On the other hand, runoff is greatly increased by the use of artificial manures. These destroy the bacteria that bring about the granulation of the soil. They increase attacks by the grass grub, and also increase the numbers of anaerobic bacteria.

Our next meeting will be on 9th December, this time at the Community Centre in George Street. This will be more of a social function when Mrs J. M. Milnes will show some films of her trip overseas. Ladies are asked to bring a plate. We shall take this opportunity to wish our president "bon voyage" on his trip to England and the U.S.A. —C. S. GORDON.

OTAGO BRANCH

The Otago Branch has had some very interesting meetings of recent months.

Mrs Bruce Smith, who has returned from abroad, gave us some very good descriptive facts on gardening in England, the Channel Islands, Brittainy, France, Uganda, Belgian Congo and through Kenya. She also visited Melbourne where she was the guest of Dr. Lowell Thomas, the rose-grower whose wife has a border of 150 camellias, which were a lovely sight, as well as the magnificent roses.

At the September meeting, Mr Donaldson of Leith Valley gave us a very instructive talk on roses which are his speciality.

Mr McKenzie gave an illustrated talk on the affect of "Diet on Mental Health" at our September meeting.

We are very grateful to the good people who make our meetings so interesting.

We hope to put a good float in the Festival procession on 26th January, 1960, and hope all members will rally round and help to make it a success.

The Secretary will be very pleased to receive any offers of help from members, of flowers, vegetables or a litle time to assist in decorating the float. —Mrs N. L. J. NELSON.

AUCKLAND BRANCH

FIELD DAYS

Our September Field Day took the form of a working bee at the "Chimes", the Horticultural Headquarters Building. About fifty people attended and were assigned to various tasks. The ladies, under the direction of Mrs Thornton, attended to the indispensable job of providing welcome cups of tea for the three breaks, and cutting out redundant bamboo thickets, and preparing the canes for garden stakes for sale. Mr Thornton supervised the work on the structural alterations. Two tradesmen made ready steel staunchions and beams to support the first floor, where existing partitions have been removed, and so converting the lower floor to a large Assembly Room. Others set concrete pads to support the steel uprights. Altogether a very industrious day in both the building, and the grounds, which in the not too distant future, will be transformed to an oasis of variety and colour, in the midst of the city.

The October Field Day found us at Mt. Smart Domain, where, every year we hold at least one field day for the purpose of giving a practical demonstration of the method of making Compost. Among the eighty present, were a number of new members. We were delighted to have with us Mr and Mrs Herrick of Dunedin.

A demonstration of the Quick Method of making was given. The materials consisted of grass, leaves, and a very small quantity of sawdust. The ingredients were all cut up, and mixed together before placing in the bin. Mr Thornton explained that to get the best results the heap needed turning every day. As a matter of fact, a fortnight later the Compost was ready to use. After refreshments had been served, members made a guided tour of the quarry workings in the crater. Each year many thousands of yards of scoria are removed and sold, and each year the final achievement of an Olympic Sports Stadium draws nearer. Our President, Mr R. L. Thornton, is in charge of the development of Mt. Smart Domain, and in the fifteen years it has been under his care and direction, he has transformed the slopes of the Mount with native trees and shrubs, and a disused quarry into a cool grotto of ferns. The Domain is now a very beautiful, and delightful park.

MONTHLY MEETINGS

Mr Thornton was in the chair at our September meeting at which over a hundred members were present to hear Mr Coleman, of the Department of Agriculture, speak on the successful growing of vegetables.

Some of the interesting points he stressed were:—Conservation of ground, successive sowings, quantity and variety to sow, and time to sow. Mr Coleman answered many and varied questions, after which he was accorded a very hearty vote of thanks, which was carried by acclamation. The quality and quantity of the exhibits of fruits, vegetables and flowers on the competition stands, were a credit to all who entered.

Our October Monthly Meeting was held on Tuesday 27th, at Horticultural Headquarters, the "Chimes". Over a hundred members attended, and although the large lecture room is still far from finished, room was found to erect your competition stand. There were quite a large number of entries in the flower and shrub sections, and several lovely entries in the decorative section. Our President, Mr R. L. Thornton, was in the chair, and on him fell the full burden of answering all the questions. It was "Questions and Answers" night. Many and varied were the questions in the Question Box, and Mr Thornton dealt with all of them, fully and adequately. Questions and Answers is always popular with the members, as most of us have at least one problem that is solved for us, even if we have not sent in any questions. At the conclusion of the meeting Mr Macalister moved a vote of thanks to Mr Thornton which was enthusiastically carried by acclamation.

—J. MEADE.

HIVE OF ACTIVITY

The Auckland Branch has been very active indeed over the past two months. The Horticultural Council held their Spring Show in the Concert Chamber and the Town Hall on 10th and 11th September. The Compost Society had a very attractive stand decorated with shrubs and flowers. We also had on show a small Compost bin, with a glass front, showing the layers of material in the bin. From this effort we enrolled a number of new members.

Our President, Mr Thornton, has taken over the supervision of the alterations of the "Chimes". Most of the work is being done by voluntary labour, which means that many of our members have given, and are still giving a great deal of time and energy to this project. Naturally we are very anxious to have not only the building finished, but also to have the grounds laid out, in time for our annual Show in March next year. There still remains a lot of hard work to be done. The Horticultural Council are putting on a show at the A. & P. Show at Epsom Show Grounds, on 27th and 28th November. Our Society is competing in the Decorative Bay Section, which is in the charge of Mesdames Berryman, McKechnie, Misses Johnson and Ansell. The theme they have decided on is "The March of Time", all to be carried out in flowers. The Society is also putting on a demonstration of the making of Compost, using the soil shredder, and three small bins. We are hoping by this demonstration to attract a large number of new members. —(Mrs) E. H. YOUNG.

WELLINGTON BRANCH

"The Gardener And His Food"

After a few introductory remarks in which the President, Mr Bristow, extended a warm welcome to the many new members present, Mr G. D. Ayson told the audience of nearly sixty members of his experience in growing cyclamen plants. The ideal soil mixture, according to the speaker, consists of parts of loam, 6 parts of Compost, 2 parts of sand, a little charcoal and some dry cow manure. In the short time allotted to Mr Ayson the members certainly enjoyed a very full and interesting account of cyclamen-growing.

The next and main speaker for the evening was Mr G. Liss, whose talk was called "The Gardener and His Food'. The two main points on which Mr Liss based his talk were:

1. Food—the way it is produced.
2. What happens to the food after it has been produced.

Mr Liss stressed the importance of a balanced soil necessary to produce the essential elements to grow food rich in minerals and vitamins. Mr Liss particularly mentioned the standard breakfast of "Mr Everybody", which often consists of a cereal. Usually the grain from which the cereal is made has been overprocessed, and the wheat germ taken out and sold separately. In connection with this Mr Liss mentioned a book by Gerald Carson: "The Cornflake Crusade" in which the author cams that very little nutritional value is found in this cereal. From the audible response of the audience it was obvious how much this information is needed.

Mr Liss then went on to talk on the home garden for which he gave some useful information. Good varieties of cabbage include Golden Acre and Slowbold. The latter is excellent as a winter cabbage as it is slow to go to seed. Garlic has proved to be a very good all-year-round plant. For an artichoke bed, plant the artichokes 6 inches deep and 12-15 inches apart.

We were made aware by this talk how very important it is to use more fresh food, unadulterated by cooking and processing.

At the 3rd November meeting a large audience of just under a hundred members spent a very enjoyable evening watching a most interesting film, "Desert Conquest", in which a large area of desert in Australia is shown being brought into production.

Our vice-president, Mr W. B. Bennett, then told us about our counterpart in England, "The Soil Association", and the remarkable work they have achieved in the last ten years.

The evening closed with supper, which enabled members to meet each other and exchange their views on gardening topics.

FIELD DAY

On Saturday, 7th November, about sixty of us left Wellington in two chartered buses for a Field Day at Masterton. The first stop was at the summit of the Rimutakas where Mr Ayson provided ice creams for the trippers.

In Tauherenikau we debussed for morning tea at the "Byways". Here a party of fishermen with freshly caught flounders from Lake Wairarapa did a brisk business with our members.

Wellingtonians are usually starved for the sight of trees, and everyone seemed to enjoy the passing Wairarapa countryside and its very beautiful trees.

At Masterton our party visited Blake Bros.' commercial composting plant, and Mr Blake explained the whole process.

After dinner at the Empire Hotel we visited the gardens and home of Mrs Donald. Here, beyond the large swimming pool, a splendid stand of native bush has been successfully established (complete with ground-cover of ferns) by hand-planting over a period of fifty years. Our hostess led us along a winding bush track which opened suddenly on to a stream. From a promenade deck coud be seen, across the water, long racimes of blue wisteria and yellow laburnums cascading from trees thirty feet high to meet their reflections in the water below.

We next visited the country home of Mrs Maunsell. Its beautiful English architecture was superbly framed in several acres of grounds laid out with English, Canadian and native trees set in great sweeps of lawn and gardens.

Several members also managed to fit in a brief visit to Mr and Mrs Divers to see their excellent collection of irises.

We were all the guests of Dr. and Mrs Parr, of Masterton, for a delicious afternoon tea in the beautiful setting of their garden, where tables and chairs were laid out under the trees. We thank most warmly Mrs Parr, Mrs Fagan, Mr Rigg, and all who so kindly helped them with offers of hospitality to us, for their great kindness in making this one of the most pleasant outings our Branch has so far enjoyed. The organising of Mrs Parr and her friends at Masterton was really splendid.

At the Wellington Branch keen interest in the Society is growing rapidly. Forty new members have joined this Branch since the last issue of "COMPOST", and it is encouraging to notice that recent attendances at our meetings are the largest we have had for many years.

The younger age-groups in our membership are increasing considerably, while the older members are gving the Branch their wholehearted and valued support.

At the Wellington Horticultural Society's outstanding Spring Show, large crowds visited our Compost exhibit. This was a large and colourful display of spring flowers, vegetables and compost-making, which won the Horticultural Society's Award of Merit.

—A. J. BRISTOW.

Mention
COMPOST MAGAZINE
when writing to advertisers
it helps them ...
helps you
and helps us!

OAMARU BRANCH

N.Z. AND CHINA

A large attendance of members and friends at the September meeting enjoyed a very interesting address by Mr H. M. Sievwright, Pastoral Lands Officer, Timaru. When with the aid of two projectors and two screens he showed the great comparison between the beautiful high country in New Zealand and its opposite in China, which country he has twice visited with consignments of sheep sent there by U.N.R.A.

LANDSCAPE GARDENING

At the October meeting, Mr Beveridge of the Oamaru Public Gardens opened his address with a blackboard and chalk drawing of landscape gardening, then followed with instructions on growing plants from seed and he stressed the care necessary when pricking the seedlings out into larger boxes containing sand, leaf-mould and broken down turf. Answering an inquiry from Mrs Arthur Gardiner who has consented to become the Patron of our Branch, Mr Beveridge gave detailed directions on growing water-lillies and on the construction of the lily pond also advice on caring for gold fish.

As usual, during supper, members and visitors enjoyed a social chat together.

—(Mrs) J. F. McDUFF.

NELSON BRANCH

MORE ABOUT COMFREY

The September meeting which was particularly well attended, was opened in the usual manner by the President, Mr L. G. White, with the recitation of the Composters' Creed.

Once again the film "Wheel Of Life" was shown and appreciated by many who had not yet seen it. Coloured slides of Comfrey taken on Mrs Dorothy Johnson's farm, illustrated how well and extensive this plant was grown. Later we are to have a talk by one of our committee members who visited and talked with Mrs Johnston while on holiday in the North Island.

Most enteresting and informative however, was the talk we were privileged to hear given by Mrs B. Etches on "Comfrey the Wonder Plant". Mr Etches who has a strawberry farm in Richmond, related some of the advantages and methods in using comfrey, one especially as a mulch. This he did extensively between the rows of strawberries, the size and number of which spoke of the great success in using this method. While comfrey was excellent to use along with other material in the Compost bin it proved to be not only labour saving but beneficial to plants and soil as well as keeping the weeds in check. As comfrey leaves are not available during the winter months, Mr Etches dries a quantity and his uses in this way are varied and many. One being to add to tea leaves when making a cup of tea. Many questions were answered very ably by Mr Etches who grows, sells and uses so much of this wonder plant.

A short talk by Mr Newman and Mr Stevens was given on beneficial results they had obtained by using Compost on a farm and home garden respectively.

Mrs Moncrieff spoke of the advantages of using organically grown seeds which would be able to be purchased from Chase's in England. This idea was thought very highly of by those present.

A god sale of healthy produce augmented the funds and a supper of wholemeal bread and scones brought to a close a very happy evening.

COMPOST MAKING ON THE SCREEN

Once again an excellent attendance, presided over by Mr L. G. White.

Coloured slides taken and processed by Alec Jacobson with commentary by Mr White of the complete making of a Compost heap. The whole procedure was illustrated and should be of special interest to new members, many of which were present. Also was shown Mr White's cauliflower crop which had to be seen to be believed, Compost grown of course plus a dressing of chopped seaweed, which he also uses extensively in his Compost.

Mr White and his trailer are a familiar sight on Tahuna beach after rough seas and he puts seaweed through a chaff cutter for easy application.

A short talk was given by Mr Lionel Swain who is shortly to leave for Auckland and has our best wishes.

The remainder of the evening was spent in question time and general discussion, and followed by supper, thanks to the ladies responsible.

—MRS H. YELLOWLEES

NATIONAL COUNCIL DOINGS

The President, Editor and National Councillors extend to all members and readers the Compliments of the Season, and wish all Good Gardening and Good Health for 1960.

Mr W. T. Wainman, who presided over the October meeting of the National Council extended a welcome to Mr F. C. Cooper (Immediate Past President, Dunedin) and expressed pleasure at his presence. Mr Cooper who has been in ill health, has missed several meetings. The keenness of Mr Cooper can be guaged from the fact that as the official Otago representative on the Council he often travels up to Christchurch from Dunedin at his own expense to attend Council meetings.

The problem of the venue of the annual meeting was discussed at length and on the motion of Mr T. D. Lennie, it was decided that owing to the difficulty of finalising suitable arrangements for the Conference/Annual meeting in March, that the meeting be held in the school holidays in May; if this date is unsuitable to the Hastings Branch the meeting to be held at Arahina, Marton. It was moved that failing Hastings' acceptance of this offer, the National Council would be hosts for the meeting.

The Editor intimated that any Branch requiring a block of the Society Badge for newspaper advertising could obtain one on application to him.

THE BALANCE OF NATURE

Any fully matured science of ecology will have to grapple with the fact that man, from the ecological point of view, is one of those animals which are in danger from a too successful participation in the struggle for existence. He has upset the balance of nature to a point where he has exterminated hundreds of other animals and has exhausted soils. Part of this he calls a demonstration of his intelligence and of the success which results from his use of it. Because of that intelligence, he has learned how to exploit resources very thoroughly, and he is even beginning to learn how to redress the balance in certain minor ways. But he cannot keep indefinitely one step ahead of overcrowding and starvation; and from the standpoint of nature as a whole, he is both a threat to every other living thing and, therefore, a threat to himself also. *(Prof. J. W. Krutch in an article republished by The Organic Soil Association of Southern Africa).*

—"Veldtrust"

BRANCH PROGRAMMES

NELSON BRANCH

All meeting at W.C.T.U. Rooms, 7.45 p.m.

DECEMBER—No meeting.

FIELD DAY—Watch the paper for particulars of a visit to Mr J. W. Corbys' Nursery at 23 Emano Street, Nelson.

◆

WELLINGTON BRANCH

We meet on the first Tuesday each month (excepting January) in the Public Library Lecture Hall at 7.45 p.m. There is an excellent Library for gardeners and a "Bring and Buy" stall of bargains—plants, seeds and vegetables.

TUESDAY, 1st DECEMBER:

This is our Christmas Social Evening. An excellent programme is being arranged, and your friends are invited. Will lady members kindly bring supper?

N.B.—There is no meeting in January.

Wellington Branch wishes all Composters a Merry Christmas, happy holidays, and a good summer garden.

TUESDAY, 2nd FEBRUARY:

The programme for this meeting will be announced in the "Evening Post" of February 1st, under the Public Notices column, and in our next Branch circular.

◆

AUCKLAND BRANCH

SATURDAY, 12th DECEMBER—

Garden Party at the home of the President. Bus fares 3/6 return.

Bus leaves from behind the C.P.O. at 1.30 p.m.

PLEASE NOTE: Change of meeting place—now at the Horticultural Headquarters, 57-59 Symond Street, City, otherwise known as "The Chimes".

UPPER HUTT BRANCH

Meetings are held in St. Hilda's Hall, Upper Hutt, every first Tuesday in each month. Bring a friend!

◆

SOUTH CANTERBURY BRANCH

Meetings usually in the hard of Hearing League Rooms, Tekapo Buildings, second Wednesdays in alternate months.

WEDNESDAY, 9th DECEMBER—

Meeting for this night only—Community Centre, George Street.

Social and Film Evening. Mrs J. Milnes will show films of her recent trip to the Old Country.

Ladies a plate. Sales Table to help funds.

JANUARY—No meeting.

WEDNESDAY, 10th FEBRUARY—

Annual Meeting.

◆

WANGANUI BRANCH

Meetings held on the second Thursday of the month at the C.P.C. Rooms, 115 Bell Street, at 7.45 p.m. Visitors welcome. Bring a friend.

◆

OAMARU BRANCH

Meetings held each LAST TUESDAY in each month in the National Party Rooms, Stewart Street, Oamaru.

Come and bring a friend. Nonmembers also welcome.

◆

OTAGO

Meeting now on SECOND WEDNESDAY each month. We will meet as usual in the National Party Rooms in High Street.

NO MEETING in January.

FLORAL FLOAT in the Festival procession, 26th January (see Branch Notes).

First meeting 1960 on second Wednesday in February.

Published by the New Zealand Organic Compost Society and printed by D. N. Adams Ltd., Tattersalls Lane, Christchurch, New Zealand. Registered at G.P.O. Wellington for transmisson as a magazine.

WATTIE'S fresh Frozen and Canned Foods, Fruits and Vegetables, are all grown in New Zealand's richest natural garden, Hastings and Gisborne.

Healthful, Economical; ask for

WATTIES

Have you purchased your copy yet?

THE N.Z. COMPOSTER'S GUIDE

is a booklet every member should read.

1/8 postage paid.

Obtainable from your Branch Secretary or direct from
THE NATIONAL SECRETARY,
27 Collins Street, Addington, Christchurch.

A MUST in Reading Matter

THE GARDENER

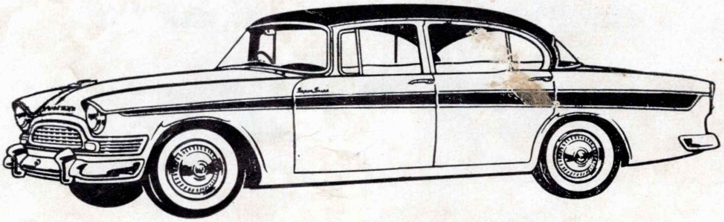
A Monthly Magazine devoted to all that's worthwhile in Gardening

"The Gardener and Small Livestock and Pet Owner", £1 (3 dollars) a year, post free, 1/6 per copy. Obtainable from Deanrow, Letchworth, England.

DO NOT MISS A SINGLE COPY!

Please mention **"Compost"** when writing!

THE FINEST CAR EVER MADE
BY THE ROOTES GROUP



The "Snipe" has always offered something more for your money in refinement and elegance. Now this new, spacious, richly appointed 3-litre embodies advances in performance, safety and styling which enhance its reputation as a car of outstanding worth. The ultimate in driving ease. Borg-Warner automatic transmission is available as an extra.

See your Humber dealer for details.

NEW 3-litre

Humber

SUPER SNIPE

- Engine increased to 3-litres, now 129 b.h.p.
- Disc brakes
- Luxury appointments
- More headroom
- New colour styling

N.Z. Distributors : TODD MOTORS LTD., Licensed Motor Vehicle Dealers, Wellington